

ABSTRACT OF THE DISCLOSURE

**[00054]** Provided is an ion implanter having a deceleration lens assembly  
5 comprising a plurality of electrodes in which one or more of the apertures of the  
deceleration electrodes are shaped in a manner which can improve performance of  
the ion implanter. In one embodiment, an electrode aperture is generally elliptical in  
shape and conforms generally to the shape of the beam passing through the  
aperture. In another aspect, an axis segment extends 40% of the length of the  
10 aperture from the aperture center to an intermediate point at the end of the segment.  
The average width of the aperture measured at each point from the center to the  
intermediate point is substantially less than the maximum width of the aperture.